# University of California Los Angeles

# Closed-Loop Subspace Identification of a Quadrotor

A thesis submitted in partial satisfaction of the requirements for the degree Master of Science in Engineering

by

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#### Abstract of the Thesis

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Professor Steve Gibson, Chair

Ne quo feugiat tractatos temporibus, eam te malorum sensibus. Impetus voluptua senserit id mel, lucilius adipiscing at duo. Suas noster sanctus cu pro, movet dicam intellegebat pri ad, esse utamur vulputate ut per. Admodum facilisi sea an, omittam molestiae pertinacia vim eu, et eam illud graeco. Enim persius duo ei, mea te posse congue putent.

Has ut commodo inermis definiebas. Eu pro audire fabellas. Te qui zril omnes forensibus, ius an dico tempor maiorum. Ea mel illud adipisci.

Ad vel dicant aliquip, ut eam agam constituto, no quo erant melius. Porro labores invidunt ad vel, quaeque epicurei vituperatoribus ex cum. Qui tamquam omnesque ex, essent percipitur intellegam an per. Iusto expetenda sed et.

The thesis of Andrew G. Kee is approved.

Steve Gibson, Committee Chair

University of California, Los Angeles 2013

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## CHAPTER 1

## Introduction

For text, let's use the first words out of the ispell dictionary.

### 1.1 This is a section

aback abaft abandon abandoned abandoning abandonment abandons abase abased abasement abasements abases abash abashed abashes abashing abasing abate abated abatement abatements abater abates abating abbe abbey abbey's abbeys abbot abbot's abbots abbreviate abbreviated abbreviates abbreviating abbreviation abbreviations abdomen abdomen's abdomens abdominal abduct abducted abduction abduction's abductions abductor abductor's abductors abducts abed aberrant aberration aberrations abet abets abetted abetter abetting abeyance abhor abhorred abhorrent abhorrer abhorring abhors abide abided abides abiding abilities ability ability's abject abjection abjections abjectly abjectness abjure abjured abjures abjuring ablate ablated ablates ablating ablation ablative ablaze able abler ablest ablute ably abnormal abnormalities abnormality abnormally aboard abode abode's abodes abolish abolished abolisher abolishers abolishes abolishing abolishment abolishment's abolishments abolition abolitionist abolitionists abominable aboriginal aborigine aborigine's aborigines abort aborted aborting abortion abortion's abortions abortive abortively aborts abound abounded abounding abounds about above aboveground abrade abraded abrades abrading abrasion abrasion's abrasions abreaction abreactions abreast abridge abridged abridges abridging abridgment abroad abrogate abrogated abrogates abrogating

abrupt abruptly abruptness aback abaft abandon abandoned abandoning abandonment abandons abase abased abasement abasements abases abash abashed abashes abashing abasing abate abated abatement abatements abater abates abating abbe abbey abbey's abbeys abbot abbot's abbots abbreviate abbreviated abbreviates abbreviating abbreviation abbreviations abdomen abdomen's abdomens abdominal abduct abducted abduction abduction's abductions abductor abductor's abductors abducts abed aberrant aberration aberrations abet abets abetted abetter abetting abeyance abhor abhorred abhorrent abhorrer abhorring abhors abide abided abides abiding abilities ability ability's abject abjection abjections abjectly abjectness abjure abjured abjures abjuring ablate ablated ablates ablating ablation ablative ablaze able abler ablest ablute ably abnormal abnormalities abnormality abnormally aboard abode abode's abodes abolish abolished abolisher abolishers abolishes abolishing abolishment abolishment's abolishments abolition abolitionist abolitionists abominable aboriginal aborigine aborigine's aborigines abort aborted aborting abortion abortion's abortions abortive abortively aborts abound abounded abounding abounds about above aboveground abrade abraded abrades abrading abrasion abrasion's abrasions abreaction abreactions abreast abridge abridged abridges abridging abridgment abroad abrogate abrogated abrogates abrogating abrupt abruptly abruptness aback abaft abandon abandoned abandoning abandonment abandons abase abased abasement abasements abases abash abashed abashes abashing abasing abate abated abatement abatements abater abates abating abbe abbey abbey's abbeys abbot abbot's abbots abbreviate abbreviated abbreviates abbreviating abbreviation abbreviations abdomen abdomen's abdomens abdominal abduct abducted abduction abduction's abductions abductor abductor's abductors abducts abed aberrant aberration aberrations abet abets abetted abetter abetting abeyance abhor abhorred abhorrent abhorrer abhorring abhors abide abided abides abiding abilities ability ability's abject abjection abjections abjectly abjectness abjure abjured abjures abjuring ablate ablated ablates ablating ablation ablative ablaze able abler ablest ablute ably abnormal abnormalities abnormality abnormally aboard abode abode's abodes abolish abolished abolisher abolishers abolishes abolishing abolishment abolishment's abolishments abolition abolitionist abolitionists abominable aboriginal aborigine aborigine's aborigines abort aborted aborting abortion abortion's abortions abortive abortively aborts abound abounded abounding abounds about above aboveground abrade abraded abrades abrading abrasion abrasion's abrasions abreaction abreactions abreast abridge abridged abridges abridging abridgment abroad abrogate abrogated abrogates abrogating abrupt abruptly abruptness aback abaft abandon abandoned abandoning abandonment abandons abase abased abasement abasements abases abash abashed abashes abashing abasing abate abated abatement abatements abater abates abating abbe abbey abbey's abbeys abbot abbot's abbreviate abbreviated abbreviates abbreviating abbreviation abbreviations abdomen abdomen's abdomens abdominal abduct abducted abduction abduction's abductions abductor abductor's abductors abducts abed aberrant aberration aberrations abet abets abetted abetter abetting abeyance abhor abhorred abhorrent abhorrer abhorring abhors abide abided abides abiding abilities ability ability's abject abjection abjections abjectly abjectness abjure abjured abjures abjuring ablate ablated ablates ablating ablation ablative ablaze able abler ablest ablute ably abnormal abnormalities abnormality abnormally aboard abode abode's abodes abolish abolished abolisher abolishers abolishes abolishing abolishment abolishment's abolishments abolition abolitionist abolitionists abominable aboriginal aborigine aborigine's aborigines abort aborted aborting abortion abortion's abortions abortive abortively aborts abound abounded abounding abounds about above aboveground abrade abraded abrades abrading abrasion abrasion's abrasions abreaction abreactions abreast abridge abridged abridges abridging abridgment abroad abrogate abrogated abrogates abrogating abrupt abruptly abruptness